



Streets

Walnut



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Streets: The Most Prevalent and Important Public Spaces



Wisconsin Avenue

Introduction

Fixed routes of human travel have served as corridors for commerce and places for human interaction from the earliest trails and foot paths. In recent centuries these functions, and others, have been principally provided by streets.

In order to properly design the streets of Milwaukee's future, the function of each street must first be discerned and understood. Additionally, the entire aspect of each of the City's streets must be defined and fathomed. This second point is important for both the streets and the overall urban setting because streets are much more than the space between the curbs where vehicles travel.

The space of a well-designed street has at times been accurately termed an "outdoor room" that is defined by the building walls and other vertical elements along each side of the street. The streets of the City of Milwaukee form such rooms to better and lesser degrees at various locations throughout the City today. For simplicity's sake, these outdoor rooms will be referred to as "streetscapes" in this document.

The immediate and long term enhancement of Downtown demands a re-examination of each of the City's streets and all of the elements of each streetscape. Good street design is a worthy goal, because the City's streets form the most prevalent and important of all public spaces in the City. The best streets will become widely known as special places for people of mixed ages and backgrounds to gather, shop, recreate and simply be found. Such streets will easily become one of the great urban experiences, attracting visitors, residents and others to Milwaukee.

While each of the City's streets serve as multi-function corridors, this section of the Downtown Plan is focused on those aspects of the streets that serve to facilitate the movement of vehicles. Design details concerning other functions of the streets will be found elsewhere in the plan, with the pedestrian realm, as one example, being treated as an entirely separate section. Similarly, other aspects of the streets are found in the Street Typology and the Design Guidelines.

Existing Street Network

The street network for Downtown Milwaukee is comprised of what may be labeled as two modified grids. One of these grids is found on the east side of the River while the other is located on the west bank. These two grids do not match and the slight shift of the grids creates several of the most interesting spatial experiences in Downtown.

Many of Milwaukee's downtown streets are wide, because they originally accommodated street car lines. Because of this "extra" width, several opportunities exist to readapt the city to a more intensive and positive pedestrian experience by inserting modern transit systems in locations of the former street cars.

The street, highway, transit and related movement systems have had an extraordinary history in Downtown Milwaukee.

While everything evolves and changes to greater and lesser degrees, urban evolution and physical change in any city is normal, expected and sometimes dramatic. Change—at times very abrupt—is especially a part of the transportation history of North American cities in general and of Milwaukee in particular over the past several decades. However, as with most changes, even when abrupt, they do not usually occur without debate and consideration.

Indeed, the evolution of the current street and highway pattern, why it exists in its current form and how it might adapt for the future have been a major point of discussion and controversy during the development of this Downtown Plan.

The street and mobility network for Downtown has evolved over time due to: changes in local, national and international policies; technology; building and land uses; employment; lifestyle; federal banking policies; migration; and political ideology.

This evolution has had a profound effect on the function and vitality of the City's streets, as well as its activities and the vitality of Downtown. The following are the primary historical impacts:

- 1) The design and layout of the original street grid
- 2) The design and function of the original coach and carriage systems
- 3) The design and function of the electric street car
- 4) The mass production of automobiles
- 5) The Common Council's attempt to humanize the auto in the early 1900's by imposing a speed limits of 4 and 8 miles per hour
- 6) The 1929 to 1949 studies for downtown Milwaukee which predisposed motor vehicle solutions for travel demand
- 7) The introduction of the one-way street system
- 8) The 1950's perceived need, due to Milwaukee's high concentration of industry, for highways affording evacuation of Milwaukee
- 9) The 1956 Authorization of the Interstate and Defense Highway system
- 10) Removal of the street cars and tracks in Downtown
- 11) The plans to encircle Downtown with freeways
- 12) The construction of Park East
- 13) The rethinking and elimination of the notion to encircle Downtown with highways
- 14) The construction of I-794
- 15) Two generations of reliance on and use of the freeways
- 16) Phenomenal increase in the number of automobiles and vehicle miles traveled
- 17) Out migration of downtown functions
- 18) The perceived need to rebuild the Marquette interchange
- 19) The conclusion of the Southeastern Wisconsin Regional Planning Commission (SEWRPC) study to remove the Park East Freeway with no adverse impacts.

Another, more recent, set of criteria that may prove important to the shaping of the City may be found



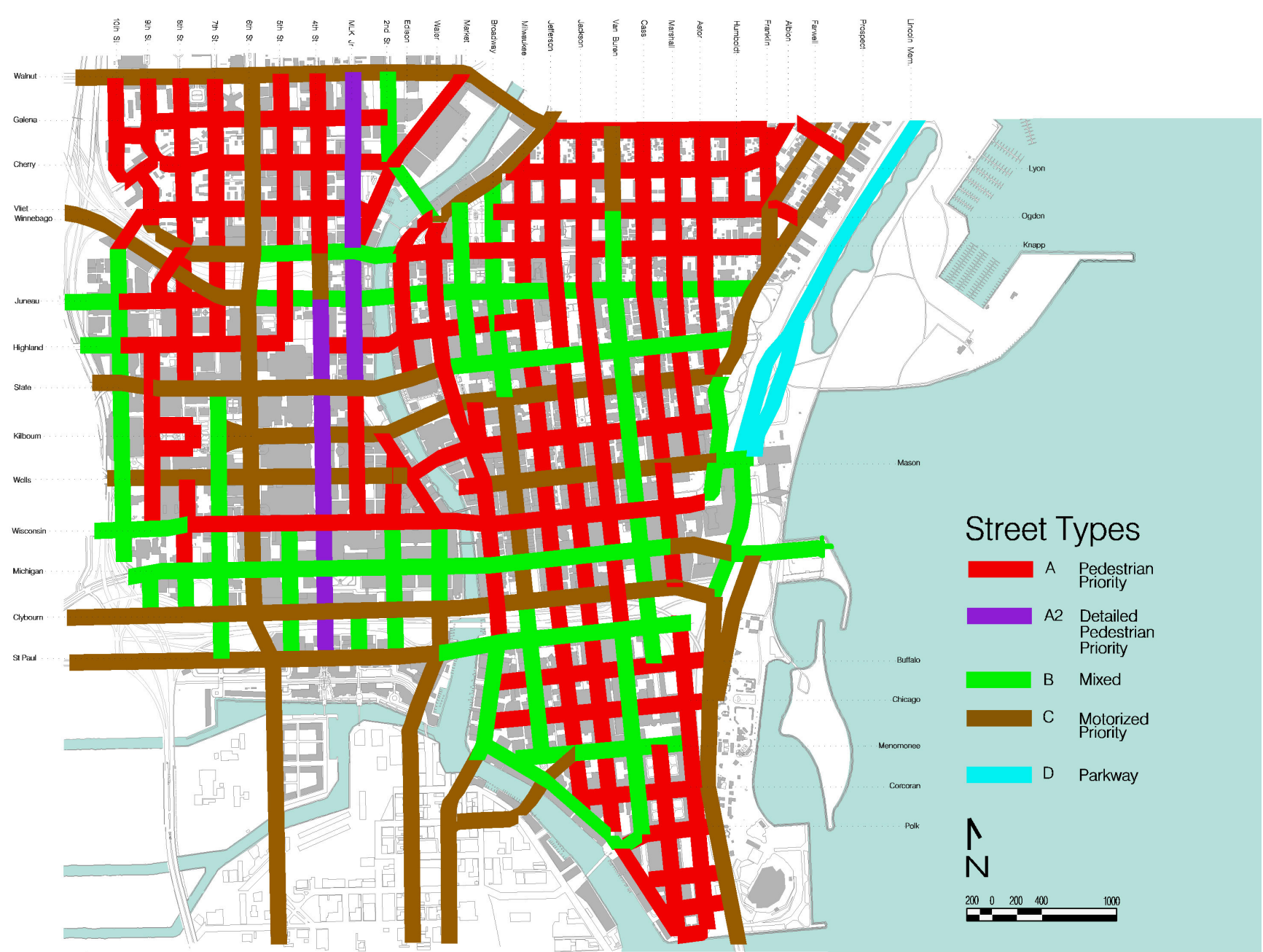
Existing grid network, 1998

in the results of the Vision Preference Survey™ of 1998-1999 which suggested:

- The rebuilding of the Marquette Intersection at an urban standard, which lowered the height and reduced the cost while adding north-south through travel capacity
- The removal of both elevated highways through Downtown and to replace these highways with three major boulevards
- Revision of the street classifications
- Return most streets to two-way travel operation;
- The introduction of a rubber-tired Downtown trolley system.

The Street Plan within the Downtown Plan considered many of the recommendations made in the long term vision plan and extracted the most important, politically acceptable and those which may be implemented relatively quickly:

- Adopt a Street Hierarchy which contain specific design standards
- Return most streets to two-way travel incrementally, not all at one time
- Remove the elevated section of the Park East freeway to 4th street
- Re-establish the grid of streets in the Third Ward and the area remaining after the removal of the Park East section.



Street Hierarchy

Streets are the most prevalent and important Urban spaces and well designed streets are a critical component of a vibrant city. A very important indicator of the success of a downtown may be found in the level of pedestrian activity. A large number of pedestrians on the sidewalks is actually essential for a healthy downtown. If the streets do not actually promote pedestrian activity people will not walk, but will drive and more traffic does not comport with anyone's definition of a vibrant, interesting place to be.

The core of Downtown Milwaukee is compact enough to make walking an ideal mode of transportation, at least seasonally. Therefore, the underlying assumption of the Downtown Plan is that all streets must be pedestrian oriented, to greater and lesser degrees depending on location. To achieve this the street network must be designed to create a balance between the competing needs of people and vehicles. The on-grade streets in Downtown have been classified from "A" through "C" to support both pedestrian activity and vehicular movement. This classification is shown on the Street Hierarchy Map. As a reflection of the urban location, sometimes the degree of variation between the categories is, in fact, very slight. (Typical cross sections can be found in the appendix.)

Determination of a street's position within the category was evaluated through an analysis of both the proposed block uses and existing daily traffic volumes. Often the classification is not continuous for the length of the street. This is to be expected as the classification reflects adjacent uses and the entry and exit points of the City.

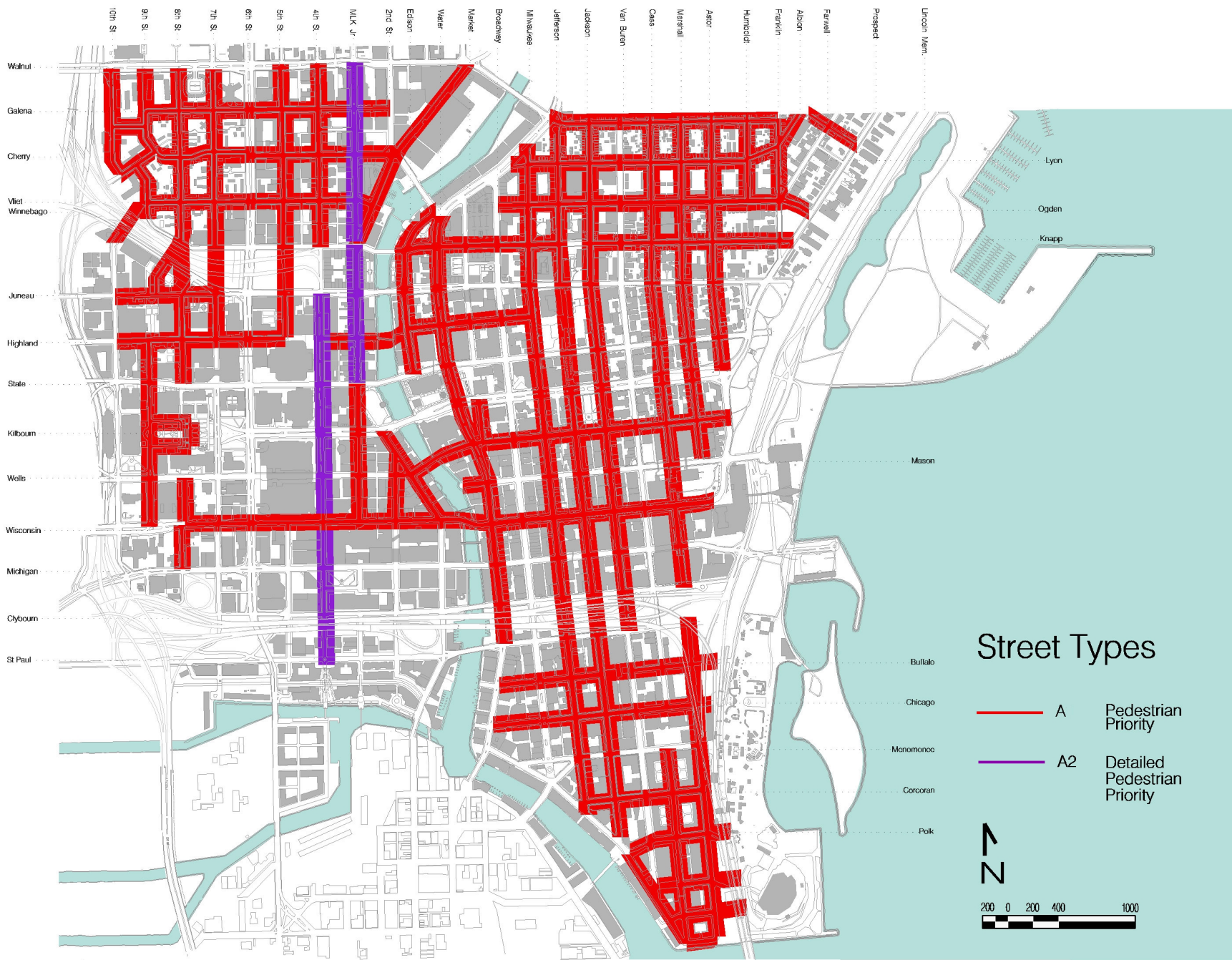
The design of Type "A" streets are those that are designed to accommodate the highest volumes of pedestrian activity. The uses adjacent to these streets are expected to generate intensive pedestrian activity both along and crossing the street.

These streets will require the most pedestrian friendly, or non-motorist priority, design approach. On these streets non-vehicular movements are first priority. "A" streets, Downtown's Main Streets, should be thought of as destination streets. Most locations where residences predominate are also classified as "A" streets.

The design of Type "B" streets balance pedestrian requirements with vehicular traffic flow. The roadway predominantly supports downtown circulatory traffic rather than through traffic. These streets will efficiently move cars between the destination streets. The uses adjacent to these streets will generate moderate amounts of pedestrian activity.

The design of Type "C" streets focuses primarily on vehicular movement. These are the principle gateways into and out of Downtown. "C" streets are corridors that provide efficient movement between points. Though these streets accommodate more motorists, pedestrian activity is not precluded. Uses adjacent to these streets are not expected to generate intensive volumes of pedestrian traffic along them. The intersections, however, might generate significant crossing volumes. In these locations the crosswalks must be clearly articulated.

In addition to these primary movement streets, there are several supplemental types: Alleys, Exclusive Pedestrian ways, Boulevards and Parkways. The Downtown highway, I-794, remains as is and is not further classified.



Type “A” Streets

Type ‘A’ streets provide pedestrian focal points and destinations. In order to first enhance and then preserve the high levels of non-motorist usage of type "A" streets, the needs, from a design perspective of non-motorists, are of highest priority.

The Type “A” streets are pedestrian-dominated streets. The design standards for these streets encourage intensive pedestrian activity. The separation of the pedestrian from moving traffic through on-street parking, lights, trees, and planters allows the pedestrian to feel very comfortable walking along and crossing these streets.

Within the area from the curb to the outside limits of Type “A” streets rights of way, particular design attention is paid to the pedestrian amenities of the street such as: benches; fountains; banners; lighting; signs; and building entrances. Between the curbs, special design attention is paid to crosswalks, on-street parking, and vehicular speeds and volumes.

Type "A" streets can range from intense shopping streets to streets that are principally residential where they may also be termed "living priority" streets.

Type "A" streets serve minimal function for vehicular traffic moving through the City and from a vehicular standpoint serve primarily to provide minor vehicular circulation within the City.

Type “A2”

In addition to the specific classifications noted above, a Type "A2" was created. The Type “A2” is a hybrid street with greater vehicular priority than a type "A" street. These are streets that by virtue of their strategic location must carry significant volumes of local traffic, and therefore could be considered a Type “B” streets. However, these streets are expected to support significant pedestrian volumes

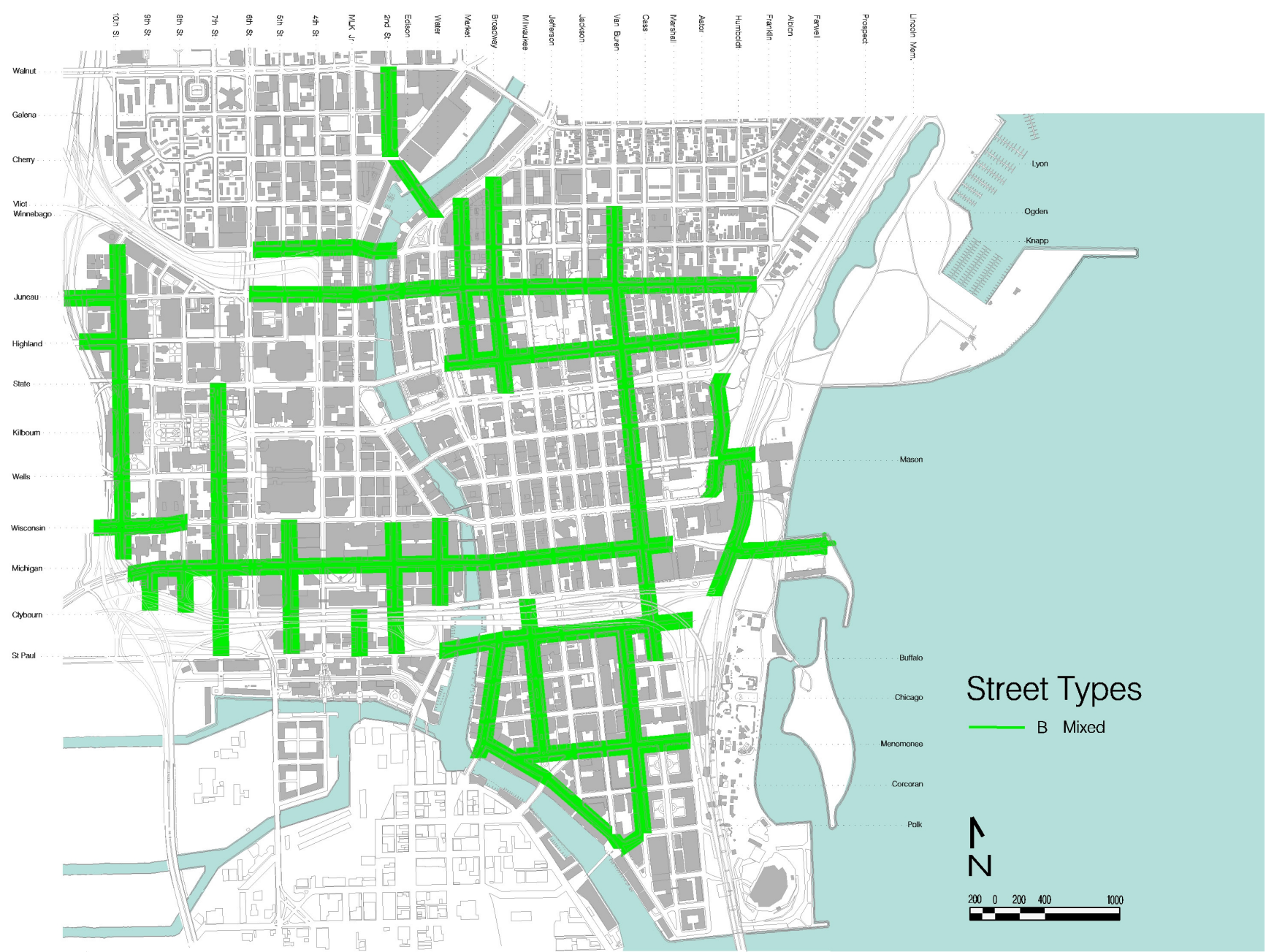


Type “A” Street



Type “A2” Street

because of the destinations and attractions along their length and at the ends. Accordingly, a type "A2" street will have many pedestrians travelling through, with fewer pedestrians actually stopping than a type "A" street. Therefore these heavier volume streets require Type “A” pedestrian amenities.



Type “B” Streets

Type "B" streets support higher volumes of motor vehicular traffic than "A" streets, but also maintain significant volumes of pedestrian traffic. Type "B" streets predominantly support circulatory traffic, while allowing a limited amount of through traffic movement.

Another descriptive label for Type "B" streets is that they are of "mixed priority" due to the competing needs of motorists and non-motorists, both of which are found in significant numbers.

As there are larger volumes of motor vehicles traveling along Type "B" streets, particularized design attention must be paid to buffering the impacts of that traffic from the adjacent pedestrian realm. This can be accomplished by techniques such as parallel parking. Careful consideration must be given to the pedestrian and vehicular conflict locations.



Type "C" Streets

Type "C" streets exhibit high volumes of traffic with a significant percentage of that traffic being traffic moving through and out of the City. Type "C" streets have less on-street parking than type "B" or "A" streets and are "motorist-priority" streets. Type "C" streets, due to their predominantly vehicular characteristics, are typically located along the edges of neighborhoods and significant pedestrian areas, as opposed to running through them.

Driveway access along these roadways will be limited. Parallel parking will be allowed at some locations throughout the day along these streets. At other locations, parallel parking may be allowed at non-peak travel times of day, as is the case presently.

These roadways will have pedestrian uses as part of the downtown pedestrian network but these will be secondary to traffic movement. Pedestrian crossings might be longer with shorter times to cross, traffic noise will be more predominant. To mitigate, these streets should be heavily landscaped, and boulevard treatment (landscaped medians) is recommended.

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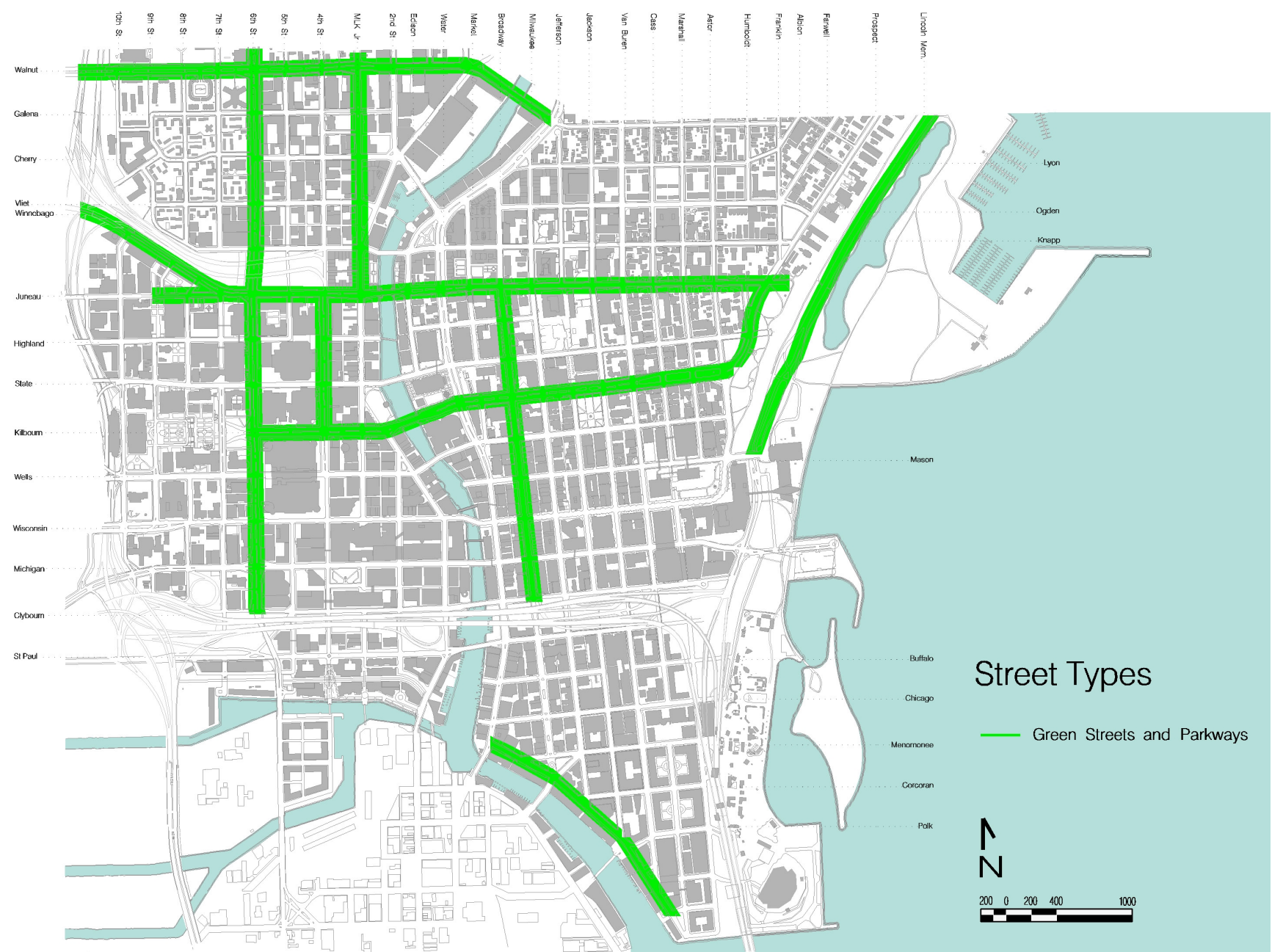


Street trees on “C” Streets contribute to Downtown greening while accommodating through traffic



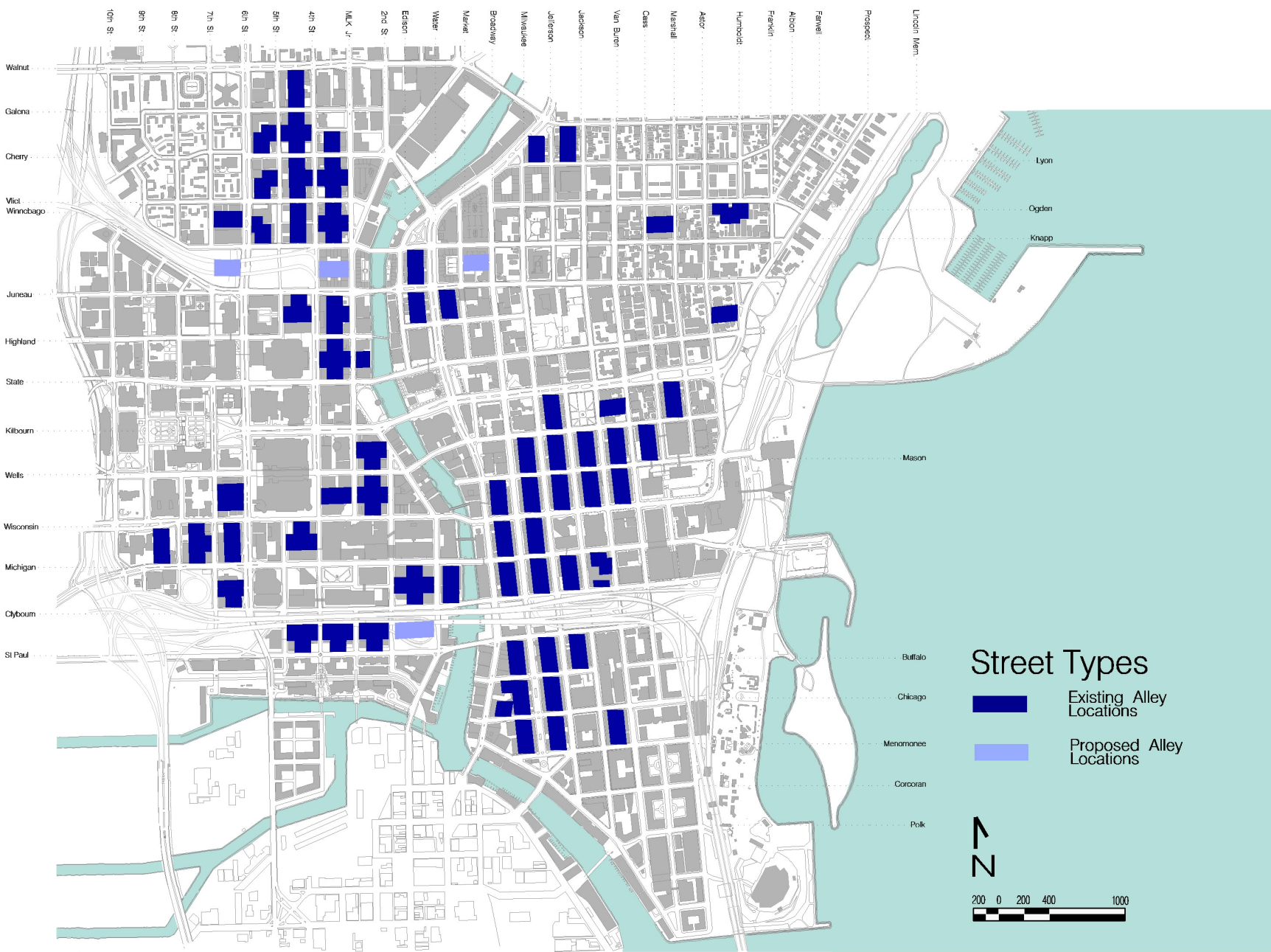
Because “C” Streets provide critical circulation routes that connect Downtown with surrounding neighborhoods and arteries, they should be ceremoniously landscaped within the existing rights-of-way

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The greening of Downtown will be, in part, accomplished through streetscape improvements. All Downtown streets can be retrofitted with street trees. Where existing right-of-way width permits central medians can be planted with trees. The Plan recommends that streets not be widened to accommodate trees. One important feature of central median trees is to slow traffic on wide streets.

Some streets provide important views and vistas; these views should not be compromised with landscaping. Tree planting must accentuate ceremonial views and connections.



Alleys

Alleys are serviceways not compatible with significant pedestrian movement. Their primary purposes are for: service access and deliveries; garbage and recycling containers; electric, sewer and water infrastructure; and access to parking. They perform this function for all land uses.

There is a relatively small number of alleys Downtown, and they serve essentially no significant pedestrian functions.

Some of the alley entrances to streets could be designed in a more pedestrian-friendly manner. For example, trash containers may be moved more into some alleys so that the trash is not adjacent with the street.



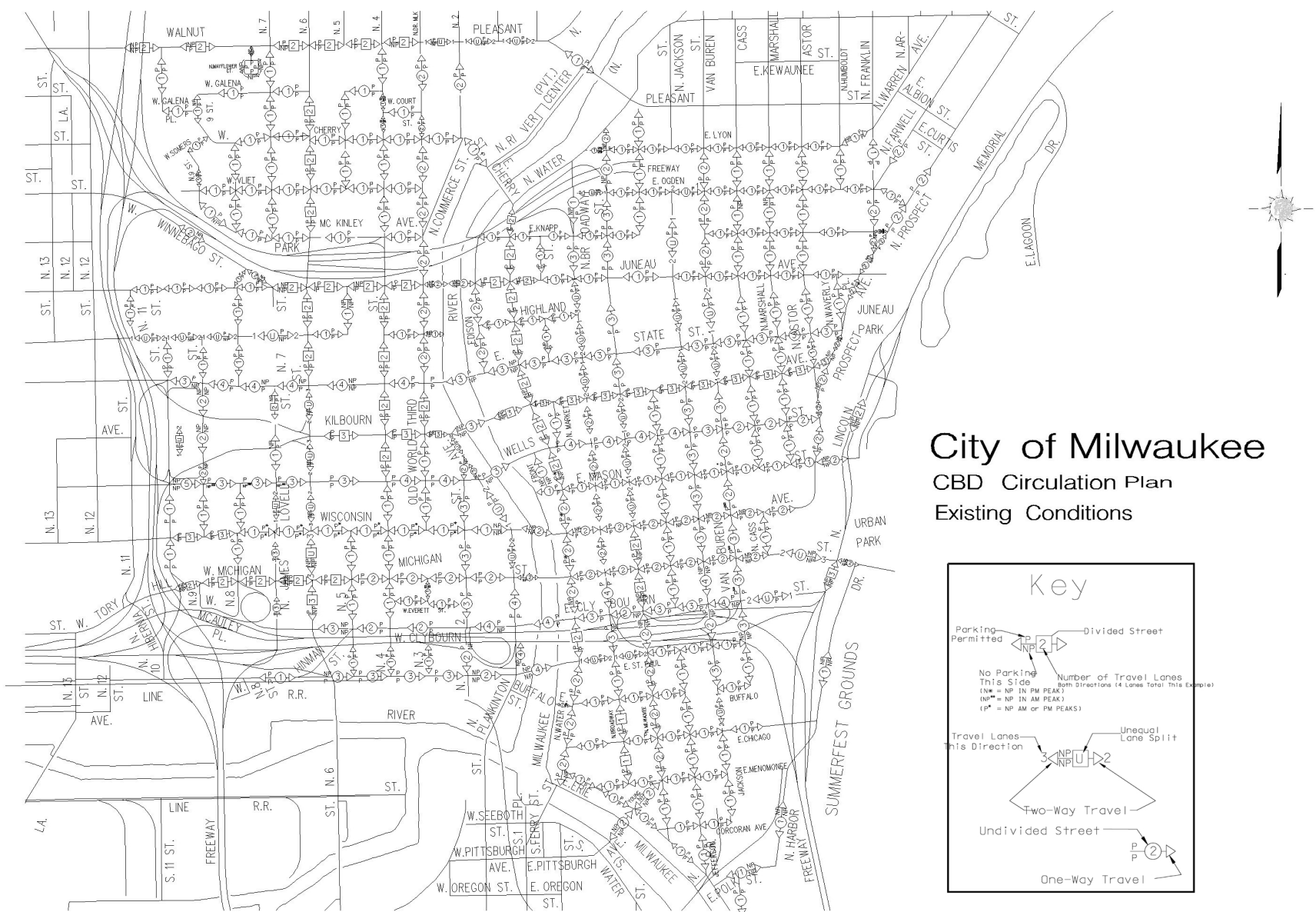
Alleys provide locations for service access and delivery areas



The Riverwalk provides an exclusive pedestrian zone that accommodates leisure activities

Excluding the parks by Lake Michigan which contains some pedestrian paths, the principal "pedestrian only" means of circulation Downtown is the RiverWalk.

The RiverWalk is a good example of the execution of a pedestrian-only space in an appropriate manner in Downtown. The RiverWalk is a perfect location for public interaction in the restaurants and other uses that make use of portions of the area. The Riverwalk will soon be complete from North Avenue to the Lakefront.



One-way/ Two-way Streets

Originally, streets were universally constructed and utilized for two-way operation. As motor vehicle traffic increased through the first half of this century, and especially following the second World War, many cities experimented with conversions to one-way systems to enhance the movement of motor vehicles. In 1946, Milwaukee was one of the first cities to experiment with one-way streets.¹

Today, pedestrian advocates and planners seeking to revitalize downtowns often promote two-way streets for several reasons. Two-way streets typically have slower vehicular travel speeds that are more appropriate in areas with pedestrians. Two-way systems are also more easily understood by visitors travelling to the Downtown. As with any design decision, however, there are tradeoffs for one-way versus two-way streets.

The effects of changing two-way street systems to one-way street systems received considerable discussion in the 1960s with several studies claiming 25-50% increases in street capacity while at the same time documenting 23-50% reductions in the number of accidents.²

However, at approximately the same time, it was also noted that "it is not prudent to make broad generalizations regarding the relative efficiency of an individual approach operating one-way as opposed to two-way, without consideration of the entire system of which the approach is a part".³ It is also imprudent to attempt to claim that the results of a group of elements changed in a street system to any one particular element. It was noted that many of the first "before and after" studies of converting two-way streets to one-way streets included "broad upgrading programs [such as] modernized signalization, new signs and markings, more rigid parking controls, reconstruction and sometimes revised traffic patterns." As many of these system changes were much broader than simply changing from two-way

to one-way operation, the Highway Research Board concluded that many such "before and after" comparisons "may well have indicated somewhat greater superiority of one-way over two-way operation than is actually the case, 'all other things equal'".⁴ Finally, it has been noted that on narrower two lane streets, that are also conducive to pedestrian activity, two-way travel actually can result in higher street capacity than a one-way street of the same configuration.⁵

The current Highway Capacity Manual makes no broad statements concerning one-way versus two-way street operation in urban areas and leaves the capacity of such streets to be calculated based on the details of the street, including the make up of the traffic, the number of lanes, and the percentage of left turns. In downtown Milwaukee, the current street network that consists of one-way and two-way streets is not operating at capacity at any location other than for extremely brief portions of the peak periods. The City is currently experimenting with conversion of some of its one-way streets to two-way and this experimentation is encouraged to continue as a part of the long range development of the Downtown. Because of the variables of where development might be encouraged with the catalytic projects and other elements that are a part of the comprehensive plan, the City will be in the best position to adapt its street travel patterns over time as the Downtown is evolving.

Something that was learned through the 1950s and 1960s attempts at converting many two-way streets to one-way streets nationwide, is that it is usually more productive to go incrementally and not propose a grand change to every street of a city such as Milwaukee. Commenting on mistakes that were made in several cities that attempted to convert too many streets from two-way to one-way operation at one time, and the problems that resulted, it was concluded that "hindsight would plainly indicate that it would have been far more successful if one or two pairs at a time had been tried instead of dis-

rupting the entire central business district".⁶

The debate continues today and the Institute of Transportation Engineers (ITE) in August 1998 devoted a large portion of its monthly publication, The ITE Journal, to the topics of downtown circulation. One article noted the success of the conversion to two-way streets in Lubbock, Texas, while another argued for "superior safety and convenience" of one-way streets.⁷

The street sections (found in the appendix) that are proposed in the long range plan for the Downtown do not predetermine one-way or two-way operation: both are possible for each of the street sections. Incremental, not dramatic, change to the City's downtown street system is also advisable and proposed as a part of the long range plan. As the Downtown evolves, the circulation pattern and modes will also evolve; each change must be made with the overall goals in mind and the appurtenant need to have a well-functioning interim system.

The Plan recommends that as a part of the long term Downtown revitalization process, the City should:

- 1) Strive to have all "A" streets operate as two-way streets. This is because the resulting slower vehicular speeds along these streets will enhance the pedestrian environment as is desired. As many of these streets will also serve as locations for shopping and entertainment centers, these streets may reasonably be expected to receive a greater number of first-time visitors to the City and the simpler two-way circulation can aid their movement in the downtown if the combinations of one and two-way streets evolve with visitors in mind.
- 2) Endeavor to have most "B" streets, especially those sections connecting with "A" streets, operating as two-way streets. This is both for enhanced circulation by visiting motorists and for the other reasons given for "A" streets.
- 3) Adjust and improve "C" streets over time to handle vehicular traffic as is appropriate. Many "C" streets will provide this function best as boulevard streets that will usually, but not necessarily, be of two-way operation. A boulevard cross section can also represent a means of enhancing the aesthetic appeal of a larger one-way street, in addition to providing enhanced aesthetics and protected turning lanes for two-way streets.

¹ University of Wisconsin at Milwaukee web page <http://www.uwm.edu/library/arch/highway>.
² Bruce, John A., One-Way Major Arterial Streets, Highway Research Board, "Improved Street Utilization Through Traffic Engineering" Special Report 93, May 1967 p.26.
³ Highway Research Board, Highway Capacity Manual, 1965. Washington DC p.115
⁴ Ibid. p. 325.
⁵ Highway Capacity Manual 1965, Ibid., p. 325.
⁶ Improved Street Utilization Through Traffic Engineering, Ibid., p. 36.
⁷ Institute of Transportation Engineers, ITE Journal, August 1998, pp. 38 and 47.



Reconsider the Status of the Elevated Highways

This portion of the Plan will examine some of the transportation-related policies that have affected the City. Specifically, the complicated nature and impacts of the grade-separated highways in the Downtown require an in depth understanding of their origin and function.

Historic Transportation Issues for the City

Before the private automobile, transportation issues in the City had a rather different set of downtown planning issues. Before electric streetcars and railroads, transportation on land was predominately either on foot or made with the assistance of animals. An examination of the past will reveal that each age has its own set of direct and indirect transportation issues to address. The realities of what may have seemed an idyllic past demonstrate that there are few if any transportation nostrums.

As occurred in all cities that developed prior to motor vehicles, the City of Milwaukee was first laid out with an understanding of the importance of walking. This understanding was not due to some early prescient understanding of the environmental benefits of "sustainable design," as it is so often termed today. Rather, this understanding came about because at the time there were fewer travel choices. Planners possessed the concomitant and elemental recognition that all people are pedestrians and that all travel is at least in part made on foot. This latter point remains true today.

The fundamental need for people to walk about the city was one of the first design policies or principles to influence the physical form of the city. However, its intrinsically understood importance to human travel was so much a part of every person's makeup that this policy did not at first need to be stated or written: it was as natural a part of planning as any aspect of planning or life could be.

Existing Grade-separated Highways in the City

The Downtown is generally understood to extend from the northwest neighborhoods south of Walnut Avenue and Pleasant Street, to the southeast Historic Third Ward, and westerly from Lake Michigan to the Highway. This Downtown, however, is divided into smaller sections by two elevated, six-lane highways that cross the City in an east-west alignment at two locations. These highways are known as the Park East Highway to the

north, and Highway I-794 more to the south (see diagram at right).

These elevated highways do not physically preclude pedestrian travel beneath them. There are some sidewalks beneath them, and large areas under these highways are used for parking. However, these highways do present significant psychological barriers to pedestrian travel: they loom over the street blocking the sun and are, altogether, out of scale for pedestrians. While many pedestrians walk to and from these locations when parking or leaving by motor vehicle, few pedestrians intentionally walk through these areas. This pedestrian "disconnection" diminishes the value and vibrancy of the severed neighborhoods, especially to the northwest.

The existence of these highways does not comport with the current policy of downtown enhancement from the pedestrian perspective. The creation of such looming structures would have been possible in 1902 as well, if constructed of different materials. However, given the speed limit imposition of that time it is unlikely that such structures would have been allowed then either, due to adverse impacts to pedestrian circulation in the City.

Park East Highway Details and Present Functions

The Park East Highway covers approximately thirty acres of the City. This highway also presently has traffic volumes of approximately 48,000 vehicles/day entering and leaving the Hillside interchange and approximately 35,400 vehicles between North 4th and North Broadway. The average daily traffic at its East end, approximately between Milwaukee and Jefferson Street drops to approximately 23,800 vehicles. As a six-lane highway, Park East Highway has an approximate daily capacity of 90,000 vehicles, so it is presently operating well below its daily capacity. Its hourly service flow capacity is approximately 11,400 vehicles (1900 cars/hour/lane at 50 mph).

The Southeastern Wisconsin Regional Planning Commission (SEWRPC) has formally studied the removal of the Park East Highway east of North 4th Street. Removing that portion of this highway would return it to where it first terminated in 1968. This study concluded that this segment of highway "could be removed without significant increases in traffic congestion" in the City under 1995 and likely 2020 conditions. Based on the SEWRPC analysis and the redevelopment potential of the freeway and adjacent parcels the Mayor, the County Executive, and the Governor of Wisconsin recently

endorsed the removal of the Park East Freeway between North 4th Street and North Jefferson Street.

Highway I-794 Details and Present Functions

Highway I-794 stretches over a mile or so of the City, and covers approximately 45 acres of City real estate. This highway has current traffic volumes of approximately 95,000 vehicles/day entering and leaving the Marquette interchange. The annual average daily traffic (AADT) over 2nd Street drops to approximately 80,000 vehicles and the AADT drops to approximately 22,000 vehicles at Lincoln Ave. As another six lane highway, I-794 also has an approximate daily capacity of 90,000 vehicles, so it is presently operating well within its daily capacity over most of its length. As with the Park East, its hourly service flow capacity is approximately 11,400 vehicles.

Together, these highways today carry upwards of 115,000 vehicles per day to and through the City. Despite their design and capabilities to transport large numbers of travelers through the City, they serve primarily to transport vehicles to and from the City. Assuming an average occupancy of 1.25 people/vehicle, these highways are also transporting approximately 144,000 people/day.

Milwaukee Citizen Vision

In the city of Milwaukee, the majority of the respondents to the visioning process indicated a strong desire for housing in an enhanced downtown with more retail and entertainment opportunities. Additional positive images and values noted from this process were the high desirability of a more pedestrian-oriented, walkable Downtown that will be serviced by various forms of transit.

If the vision of the citizens is to be implemented as a matter of public policy, then a better Downtown should be both a short and long term goal for all public policies relating to the Downtown.

As noted previously, the Park East and I-794 highways also cover approximately 75 acres of the Downtown. If these highways were removed and this land area redeveloped, then the Downtown would be more vibrant due to a significant increase in size. This addition of land, in essence a re-annexation, could increase areas available for residences, while at the same time removing two significant obstacles to pedestrians and enhancing the tax base.

Future Plans and Implementation

As noted previously, the simple and immediate removal of I-794 or the Park East Freeway west of 4th Street in the urban center would not be logical. Both of these highways represent substantial pieces of transportation infrastructure. Whenever substantial transportation infrastructure is created, it in turn creates travel patterns and behaviors that are dependent upon that infrastructure. Today, in 1999, both of these freeways serve to transport approximately 144,000 people, and numerous goods, in and out of the city. As the Downtown becomes further enhanced and more of a desirable place to live, work, shop and recreate, more people will be transported into, from, and around the Downtown area.

If the removal of the grade separated highways becomes a part of the public policy for Downtown Milwaukee, then the city will need to adopt a multi-faceted approach to achieving the goal of removing these highways and restoring these portions of the City.

- First, it must be recognized that the time required to effect the removal of these highways will be measured in years from the time that any policy is adopted to seek their removal.

- It must also be recognized that these highways simply serve as routes to move goods and people in motor vehicles. In order to remove these highways, goods and people will simply need to be transported by other modes and perhaps other routes.

- Planning will need to be completed and calculations will need to be conducted studying potential alternative means of moving existing and greater numbers of goods and people as the Downtown enhances with time.

- Engineering studies and estimates of the capacities provided by additional transit services, and possibly an estimation of the reduction in vehicular trip movements that might be achieved through the provision of additional housing and other mixed uses in the downtown should be made. This second calculation would commonly be based on the premise that if additional individuals lived, worked, and shopped in the downtown over time, then these individuals would not need to be moving into and out of the downtown as much as presently occurs.

- A study of the capitalization needs for both the enhancement of alternative routes and modes and the removal of these highways must be completed. This study, in addition to the capacity analyses mentioned above, should likely examine the cost and implications of a phased removal of sections of these highways as is presently planned for a section of the Park East Highway.

- Significant public education and support for the enhancement of the Downtown will need to be continued. The impacts of changes to the Downtown and the region likely to be caused by the removal of these highways will need to be explained, repeatedly, to be understood and accepted.

- Perhaps most importantly, if it becomes a matter of public policy that these highways should be removed, and the only significant remaining questions are when and how to implement the removal, then all other public policies will need to work in cooperation with these goals. This will require a re-examination of all other land use and transportation policies, regulations, and procedures that impact the transportation infrastructure in and near the Downtown.

- If the determination is made that the citizen's goal for an enhanced Downtown is to become a part of Milwaukee's future and that this vision extends to include the removal of I-794 and the Park East Freeway, then a long term multi-level layer of cooperation will have to be established and maintained among the city departments, land owners, state department of transportation, and to the extent necessary, federal agencies. Each year, each decision, and each dollar invested in transportation infrastructure should seek to minimize present and future dependency on these highways in order to create the optimal conditions for their ultimate removal.

Conclusions Concerning the Grade Separated Highways

Simply removing the all of the Park East Highway or I-794 without providing other attractive and functional travel options would be irresponsible. Although initially conceived to address the need of emergency evacuation, these highways address more



mundane travel purposes today. They represent routes of travel and a modal choice that are presently relatively simple and understood by many.

However, in the Vision process, the citizens have predicted a view of the City that does not include these highways. If as a formal matter of policy these highways continue to be deemed to no longer comport with the City's long range vision of itself, then the trips presently taken on these highways will need to be replaced with trips completed in another fashion.

By introducing more housing and mixed use in the downtown, some existing trips will not be made: some who now drive to work could walk to work, others who drive out of the City for entertainment may find the revitalized Downtown presents what they seek and, again, the need to drive could thereby be eliminated. Finally, if transit is significantly enhanced, it can replace the remaining functions of these highways.

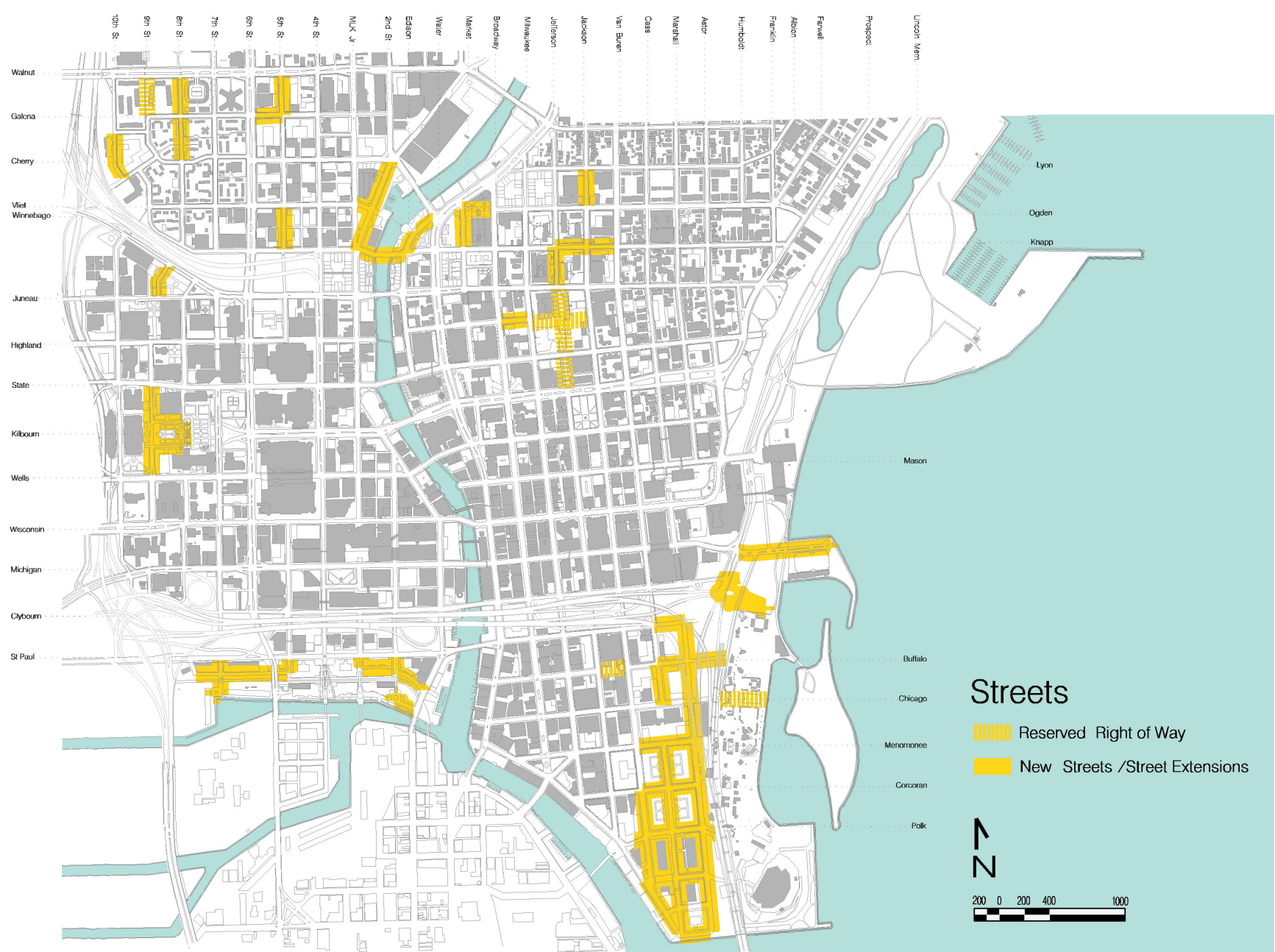
The historic record clearly demonstrates that in Milwaukee large numbers of people can and have in the past changed their modes of travel over relatively short periods of time. Indeed, in only 9 years the same number of people who presently use both grade separated highways daily, changed modes of travel. The historic record therefore demonstrates the potential for an Embarcadero-type (described more fully in the Appendix) experience in Milwaukee: if the other modes of travel can be enhanced to draw travelers to them at the same numbers as were drawn away from fixed-route transit between 1963 and 1972 then, from the City's perspective, both highways can become unnecessary. This potential exists without additional surface street vehicular capacity.

This history bodes well for the potential of the future plans for the City, and the potential for change. To effect the removal of these elevated highways will obviously require time and a series of concerted efforts.

The existing sets of conditions that have created today's dependence on these highways resulted from earlier public policies that were implemented through design, removal of buildings and other parts of the former city that stood in their way, and then the construction of these elevated highways. If

new public policies are adopted, then all manners of new infrastructure can be designed. This will likely include entirely new facilities and new transitions from adjacent freeways into the downtown.

All of these physical changes can be planned as a series of removal and construction projects that will work together with the surety of the initial construction of these highways themselves. The physical form will always be directed by the public policies and attitudes that precede it. These particular highways, born of a series of policies no longer relevant to the present or future City can be removed and their functions replaced; it is ultimately a matter of public policy and long term persistence.



Extension and relocation of the grid of streets

The Downtown Plan recommends multiple locations for the reconnection or extension of streets to reform the downtown grid. The largest number of streets that can be extended exist in the Third Ward. Other locations include streets under the removed section of the Park East freeway, street extensions in the Union Station mixed-use redevelopment area, streets around Mac Arthur Square, and four other small areas where the right-of-way should be reclaimed.

Completing or reconnecting the historic grid of streets generates the opportunity for a continuity of the street space. The grid provides the possibility for phased development, the construction of appropriate width sidewalks and streetscape, and the ability to link new buildings and the existing fabric to parks and open spaces. The grids have been analyzed and specifically designed to accommodate a range of uses and footprints. A smaller grid of streets enhances the pedestrian movement experience and creates more corner marketing opportunities. The grids also provide the opportunity for new and exciting street spaces and visual terminations.

Mac Arthur Square

The plan recommends the on-grade connection of 9th Street to provide auto access and parking around the square. The square provides a beautiful bird’s-eye view of the city. This is currently inaccessible by car and underused by pedestrians. It should become the preminent, civic square in the city. To implement this recommendation, the 10th Street tunnel must be closed and the square redesigned.

Park East

Knapp must be connected via a new bridge across the river to Martin Luther King Jr. Boulevard. A new street parallel to the river must be

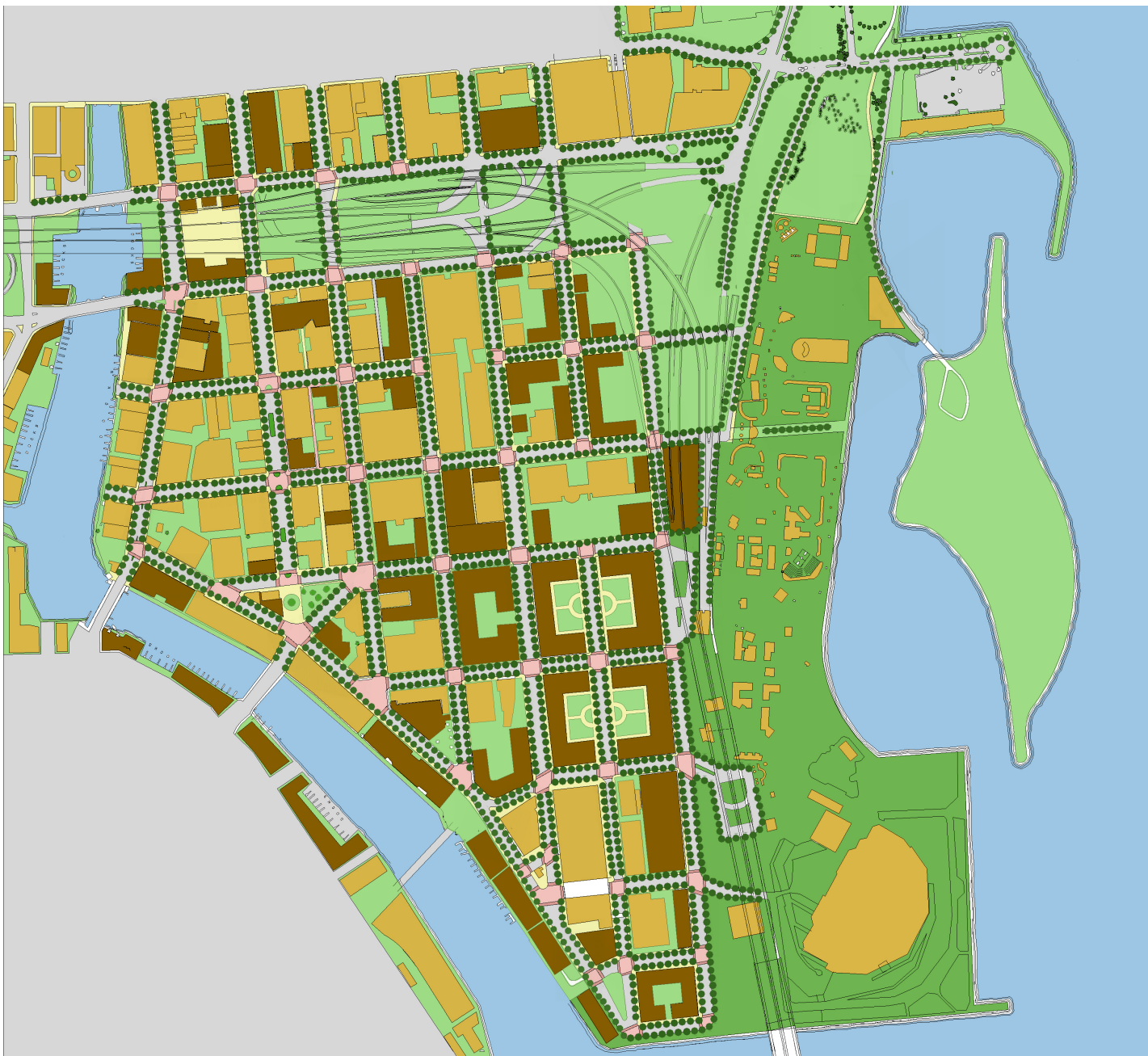
constructed between Cherry and Knapp, and finally an extension of Vliet between MLK and the extension of 2nd street parallel to the river. The major urban design feature of this grid extension is two new triangular urban parks, one edged by Water, Edison and Knapp, the other edged by Vliet, MLK and the new extension of 2nd street.

Union Station Mixed-Use District

Five new street extensions are recommended including 2nd, 3rd, 5th, 7th and 8th. All streets are extended to the railroad tracks. Ideally from the pedestrian perspective, these streets should cross on grade. Because on-grade vehicular crossings are not easily approved by railroad companies, the plan recommends various solutions to cross the tracks. 2nd, 3rd, 4th and 7th should extend over the railroad as pedestrian streets to the river. The plan calls for a retractable floor over the railroad track at 3rd and 4th Streets. The floors retract when the train approaches thereby inexpensively allowing the spatial and functional continuity of the street. (This will be further explained in the section on the Catalytic projects.) The 4th Street right of way would become the primary pedestrian connection to the river enclosed in a glass structure. The extension of 5th Street would pass under the 6th Street overpass and continue parallel to the railroad crossing 7th and connecting to North 8th. Vehicular traffic must be allowed to pass over the tracks on 7th Street thereby providing access to riverfront development opportunities. There are additional connections from North Plankinton Avenue to the river on the west side and the east side.

The Third Ward

The proposed extension of the Third Ward grid evolved through several iterations. The latest combines the initial diagram prepared during the Downtown Design Charrette, the interim draft plan presented in mid-1998 and the Millenium Momentum Plan prepared for Henry Maier Festival



Third Ward with street grid extended

Park and the most recent Historic Third Ward Development Plan and Lake Access Study. The proposed Downtown Plan recommends a grid that creates twelve (12) blocks in the Third Ward. Cass and Buffalo Streets can be extended under the freeway if the columns can be avoided without unduly manipulating the right of way between Chicago and St Paul which allows an additional five blocks to be formed.

The Downtown Development Plan recommends the East-West extension of Polk, Corcoran, Menomonee, and two new streets, south of Polk which have no names at this date; the completion of Buffalo between Jackson and Jefferson and the extension of Chicago and/or Polk Street to the lake edge. These should be closed during Summerfest and the other ethnic festivals, while left open for the remainder of the year. The extension of the North-South streets includes Jackson, Van Buren, and, potentially, Cass. The extension of the grid south of Chicago means the elimination of Harbor Drive between Chicago and Polk. Improved access and a quality street edge can now be given to the festival grounds.

Other Street Connections

Maintaining the existing street grid or restoring where it has been interrupted is generally a good objective. The City should consider making the following connections.

- Knapp between Jackson and Van Buren
- 9th between Juneau and Winnebago
- The relocation and extension of Michigan from Lincoln Memorial to the Lake
- The extension of Highland between Milwaukee and Broadway
- The block bounded by Jackson, State, Milwaukee, and Juneau should reestablish the grid formed by the extension of Jefferson and Highland. At the minimum these rights of way must be reserved.
- Jefferson between State and Kilbourn

- A new street forming the edge to the Festival ground from the Lincoln Memorial circle to the River.
- The extension of 5th Street between Vliet and Knapp
- The extension of Galena between 5th and 6th
- The extension of 5th between Walnut and Galena

Two other locations are recommended for street extensions.

- 8th and 9th between Walnut and Galena. As an option of the community these might only be pedestrian connections, although the rights-of-way should be reserved.



Existing Third Ward street grid

